60-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R03-OAR-2021-0834; FRL-9382-01-R3]

Air Plan Approval; Maryland; Philadelphia Area Base Year Inventory for the 2015 Ozone National Ambient Air Quality Standard

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a state implementation plan (SIP) revision submitted by the State of Maryland. This revision consists of the base year inventory for the Maryland portion of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE marginal nonattainment area (Philadelphia Area) for the 2015 ozone national ambient air quality standard (NAAQS). This action is being taken under the Clean Air Act (CAA).

DATES: Written comments must be received on or before **[insert date 30 days after date of publication in the Federal Register]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R03-OAR-2021-0834 at https://www.regulations.gov, or via email to Gordon.Mike@epa.gov. For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. For either manner of submission, EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be confidential business information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission

(i.e., on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **For Further Information Contact** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit https://www.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: Adam Yarina, Planning & Implementation Branch (3AD30), Air & Radiation Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. The telephone number is (215) 814-2103. Mr. Yarina can also be reached via electronic mail at Yarina.Adam@epa.gov.

SUPPLEMENTARY INFORMATION: On July 30, 2020, the Maryland Department of the Environment (MDE), on behalf of the State of Maryland, submitted a revision to the Maryland SIP entitled, "2015 8-Hour Ozone NAAQS (0.070 ppm) Marginal Area State Implementation Plan for the Cecil County, MD Nonattainment Area, SIP # 20-09." Cecil County comprises the Maryland portion of the Philadelphia Area. This SIP revision, referred to in this rulemaking action as the "Cecil County base year inventory SIP," addresses the base year inventory requirement for the 2015 ozone NAAQS.

I. Background

On October 1, 2015, EPA strengthened the 8-hour ozone NAAQS, lowering the level of the NAAQS from 0.075 ppm parts per million (ppm) to 0.070 ppm. 80 FR 65292 (October 26, 2015). Effective August 3, 2018, EPA designated the Philadelphia Area, which consists of Cecil County in Maryland and counties in Delaware, New Jersey, and Pennsylvania, as marginal nonattainment for the 2015 ozone NAAQS. 83 FR 25776 (June 4, 2018). CAA section 182(a)(1) requires ozone nonattainment areas classified as marginal or above to submit a comprehensive, accurate, current inventory of actual emissions from all emissions sources in the nonattainment area, known as a "base year inventory." The Cecil County base year inventory SIP addresses a base year inventory requirement for the Philadelphia Area.

II. Summary of SIP Revision and EPA Analysis

A. EPA Evaluation of the Cecil County Base Year Inventory SIP

EPA's review of the Maryland's base year inventory SIP indicates that it meets the base year inventory requirements for the 2015 ozone NAAQS. As required by 40 CFR 51.1315(a), MDE selected 2017 for the base year inventory, which is consistent with the baseline year for the RFP because it is the year of the most recent triennial inventory. MDE included actual ozone season day emissions, pursuant to 40 CFR 51.1315(c).

EPA has prepared a technical support document (TSD) in support of this rulemaking. In that TSD, EPA reviewed the results, procedures, and methodologies for the SIP base year, and found them to be acceptable and developed in accordance with EPA's technical guidance. The TSD is available online at https://www.regulations.gov, Docket ID No. EPA-R03-OAR-2021-0834.

B. Base Year Inventory Requirements

In EPA's December 6, 2018 (83 FR 62998) rulemaking, "Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements," known as the "SIP Requirements Rule," EPA set out nonattainment area requirements for the 2015 ozone NAAQS. The SIP Requirements Rule established base year inventory requirement, which are codified at 40 CFR 51.1315. 40 CFR 51.1315(a) requires each 2015 ozone nonattainment area to submit a base year inventory within 2 years of designation, i.e., by no later than August 3, 2020.

40 CFR 51.1315(a) also requires that the inventory year be selected consistent with the baseline year for the reasonable further progress (RFP) plan as required by 40 CFR 51.1310(b), which states that the baseline emissions inventory shall be the emissions inventory for the most recent calendar year for which a complete triennial inventory is required to be submitted to the EPA under the provisions of subpart A of 40 CFR part 51, Air Emissions Reporting Requirements, 40 CFR 51.1 through 50. The most recent triennial inventory year conducted for

the National Emissions Inventory (NEI) pursuant to the Air Emissions Reporting Requirements (AERR) rule is 2017. 73 FR 76539 (December 17, 2008). Maryland selected 2017 as their baseline emissions inventory year for RFP. This selection comports with EPA's implementation regulations for the 2015 ozone NAAQS because 2017 is the inventory year. 40 CFR 51.1310(b).[1]

40 CFR 51.1315(c) requires emissions values included in the base year inventory to be actual ozone season day emissions as defined by 40 CFR 51.1300(q), which states:

> Ozone season day emissions means an average day's emissions for a typical ozone season work weekday. The state shall select, subject to EPA approval, the particular month(s) in the ozone season and the day(s) in the work week to be represented, considering the conditions assumed in the development of RFP plans and/or emissions budgets for transportation conformity.

C. Cecil County Base Year Inventory SIP

The Cecil County base year inventory SIP contains an explanation of MDE's 2017 base year emissions inventory for Cecil County (2017 Cecil County BYE) for stationary, non-point, non-road, and on-road anthropogenic sources, as well as biogenic sources, in the Cecil County Area. The Cecil County Area consists solely of Cecil County, MD. MDE estimated anthropogenic emissions for volatile organic compound (VOC), nitrogen oxide (NOx), and carbon monoxide (CO) for a typical ozone season workweek day.

MDE developed the 2017 Cecil County BYE with the following source categories of anthropogenic emissions sources: point, quasi-point, non-point, non-road, on-road, and commercial marine vessels, airport, and railroad emissions sources (MAR). Appendix A of the Cecil County base year inventory SIP, 2017 Base Year SIP Emissions Inventory Methodologies

[1] On January 29, 2021 the Court of Appeals for the D.C. Circuit issued its decision regarding multiple challenges to EPA's implementation rule for the 2015 ozone NAAQS which included, among other things, upholding this provision allowing states to use an alternative baseline year for RFP. *Sierra Club v. EPA*, 985 F.3d 1055 (D.C. Cir.). The other provisions of EPA's ozone implantation rule at issue in the case are not relevant for this rulemaking.

(Appendix A), sets out the methodologies MDE used to develop its base year inventory.

1. Point Sources

Point sources are larger sources that are located at a fixed, stationary location. As defined by the AERR in 40 CFR 51.50, point sources are large, stationary (non-mobile), identifiable sources of emissions that release pollutants into the atmosphere. A point source is a facility that is a major source under 40 CFR part 70 for one or more of the pollutants for which reporting is required by 40 CFR 51.15 (a)(1). These point sources can be associated with a single point or group of points in space. Examples of point source emissions categories include power plants, industrial boilers, petroleum refineries, cement plants, and other industrial plants.

As stated in Appendix A, for the 2017 Cecil County BYE, MDE defined a point source located within a designated ozone nonattainment area as a stationary commercial or industrial facility that operations and emits more than 10 tons per year (tpy) of VOC; or 25 tons per year of NOx; or a 100 tpy of CO, sulfur oxides (SOx), particulate matter with an aerodynamic diameter less than 10 micrometers (PM_{10}), diameter less than 2.5 micrometers ($PM_{2.5}$), and total suspended particulates (TSP).

In Appendix A, MDE explains that it used several methods of source identification to ensure the point source inventory is as complete as possible. MDE's primary data source is its permitting program, and MDE's compliance program identifies other point sources through facility inspections and investigations. In addition, facilities are required by Maryland's emissions statement regulations, Code of Maryland Regulations (COMAR) 26.11.01.05-1 and 26.11.02.19D to certify the air emissions for the past calendar year. The certified emissions are used for inventory and planning purposes.

MDE developed the point source data for the 2017 base year inventory. The point source inventory contains emissions for electric generating units (EGUs) and Non-EGU sources in the nonattainment area. EPA guidance for emissions inventory development provides that ozone season day emissions are used for the base year inventory for the nonattainment area. MDE

developed their 2017 inventory by using emissions directly reported to the agency by facilities as required by Maryland air quality regulations. These emissions are also reported to EPA, and after going through EPA's quality assurance (QA) and quality control (QC) process, are included in EPA's National Emissions Inventory (NEI). The emissions for this base year can be found in EPA's 2017 NEI.[2]

2. Quasi-Point Sources

MDE defines quasi-point sources as that are generally considered part of the non-point or non-road emissions sectors but are included in the point source emissions inventory for a particular reason. Such reasons include Federal guidance, as in the case of certain airports, or to facilitate future general conformity determinations, as in the case of military bases, ports, and other similar facilities. EPA has reviewed the source categories included in the quasi-point sources and has found this to be a reasonable approach to handle these sources. MDE has not identified any quasi-point sources in Cecil County.

3. Non-Point Sources

Non-point sources are also called "area sources." These sources collectively represent individual sources of emissions that have not been inventoried as either specific point or mobile sources. These individual sources treated collectively as non-point sources are typically too small, numerous, or difficult to inventory using the methods for the other classes of sources.

Non-point sources that MDE evaluated for the 2017 Cecil County BYE include petroleum distribution losses (e.g., tank truck unloading and auto refueling), stationary source solvent application (e.g., dry cleaners, auto refinishing), bioprocess emissions sources (e.g., bakeries, breweries, wineries, distilleries), catastrophic/accidental releases (e.g., oil spills and leaking underground storage tanks), solid waste disposal, treatment, and recovery (e.g., incineration, open burning), small stationary source fossil fuel use (e.g., small utility boilers,

[2] Technical Support Document (TSD) for the Base Year Inventory Submitted with the 2015 8-Hour Ozone NAAQS Marginal Area State Implementation Plan for the Baltimore, MD Nonattainment Area, included in the docket for this rulemaking available online at https://www.regulations.gov, Docket ID: EPA-R03-OAR-2021-0834

wood combustion, commercial cooking), fugitive sources (e.g., construction activity and unpaved roads), fire sources (e.g., agricultural burning and vehicle fires), and ammonia sources (e.g., agricultural livestock production operations). Appendix A sets out the methodologies MDE used to estimate emissions for each of these non-point source categories. These methods are consistent with the most recent EPA emission inventory guidance.

4. Non-Road

Non-road mobile sources are also called "off-highway" mobile sources. These are defined as a non-road engine or non-road vehicle. As per 40 CFR 51.50, a non-road engine is an internal combustion engine (including the fuel system) that is not used in an on-road motor vehicle or a vehicle used solely for competition, or that is not affected by sections 111 or 202 of the CAA. Also defined by 40 CFR 51.50, a non-road vehicle (rather than engine) is a vehicle that is run by a non-road engine and that is not an on-road motor vehicle or a vehicle used solely for competition. Examples of non-road mobile sources include airport ground support equipment, agricultural and construction equipment powered by an internal combustion engine, and lawn and garden engines and equipment.

As explained in Appendix A, consistent with EPA's Emission Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards and Regional Haze Regulations, MDE used the most current version of EPA's NONROAD2008a model, which is incorporated into EPA's Motor Vehicle Emission Simulator (MOVES) model, specifically MOVES2014a, to develop the inventory for non-road mobile sources. The NONROAD2008a model includes more than 80 basic and 260 specific types of non-road equipment (e.g., agricultural, airport support, commercial, construction, industrial, recreational vehicles, recreational watercraft, lawn and garden, railway maintenance, etc.) and further stratifies equipment types by horsepower rating. Fuel types include gasoline, diesel, compressed natural gas (CNG), and liquefied petroleum gas (LPG).

Marine Vessels, Airport, Railroad Locomotives (MAR) Sources are a non-road

subcategory. MDE states in its Cecil County base year inventory SIP that, for MAR sources, MDE calculated emissions by collecting data directly from surveyed sources, or activity from state and federal reporting agencies. To develop the commercial marine vehicle emissions for the base year, Maryland used EPA's 2016 beta modeling platform. This platform was used because it provided the most recent descriptions and methodologies for calculation of marine vessel emissions. To estimate emissions for aircraft, Maryland used airport activity statistics from the Federal Aviation Agency (FAA), landing and takeoff cycle information from the Maryland Aviation Administration, and statewide survey information for landing and takeoffs, engine type, location, and usage data. Railroad emission estimates were developed using activity and fuel consumption estimates collected from the rail companies and proportioned to each county by the amount of track miles each company utilized in a county. MDE applied EPA emission factors using EPA guidance and methodologies or the best engineering method. These methods of calculating emissions are consistent with the most recent EPA emission inventory guidance.[3] Details of the development of emissions for these sources along with other non-road model sources are provided in Appendix A.

5. On-Road Sources

On-road mobile sources are also called "highway mobile sources." These sources are the motor vehicles (e.g., automobiles, buses, trucks) traveling on local and highway roads. On-road mobile source emission estimates should utilize the latest recommended on-road mobile source models; currently, that means the EPA's MOVES model for all states except California.

The MOVES model estimates emissions from vehicle exhaust and from mobile source evaporative emissions, both of which must be included in the inventory. Volatile hydrocarbons evaporate from fuel systems while a vehicle is refueling, parked, or driving. Evaporative processes differ from exhaust emissions because they don't directly involve combustion, which

[3] Emission Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations, Page 130, included in the docket for this rulemaking available online at https://www.regulations.gov, Docket ID: EPA-R03-OAR-2021-0834 PG 130

is the main process driving exhaust emissions.

As stated in Appendix A, MDE used EPA's MOVES2014a model to estimate the 2017 annual emissions as well as 2017 daily emissions from on-road vehicles and total energy consumption in Maryland. Emissions were estimated based on emission factors and vehicle activity. Emission factors for vehicles were based on vehicle type (e.g., passenger cars, passenger trucks), vehicle age, and the vehicle's operating modes. Operating modes for running, start, and idle emissions are included in MOVES. The emission factors varied over a range of conditions, such as the ambient air temperature, speed, traffic conditions, road types, road topography, etc. The generated emission factors were then multiplied by the appropriate vehicle miles traveled (VMT) to estimate emissions.

To estimate the rate at which emissions are being generated and to calculate VMT, MDE examined its road network and fleet to estimate vehicle activity. For the annual inventories, this was done for each of the twelve months in 2017 and aggregated for the entire year. MDE used computer models to perform these calculations by simulating the travel of vehicles on the Maryland's roadway system.

EPA has reviewed the results, procedures, and methodologies for the SIP base year, as well as comparing the inventory with previously QA/QC data in EPA's 2017 NEI for any data discrepancies and found none. EPA has therefore determined the base year inventory to be acceptable and developed in accordance with EPA's technical guidance.

6. Biogenic Emissions

MDE also inventoried biogenic emissions, which are not included in the anthropogenic total. Biogenic emissions come from natural sources, including vegetation, soils, volcanic emissions, lightning, and sea salt. They need to be accounted for in photochemical grid models, as most types are widespread and ubiquitous contributors to background formation of ozone. However, they are not included in the RFP baseline.

Biogenic emissions are typically computed using a model which utilizes spatial

information on vegetation and land use and environmental conditions of temperature and solar radiation. The model inputs are typically horizontally allocated (gridded) data, and the outputs are gridded biogenic emissions which can then be speciated and utilized as input to photochemical grid models.

In Appendix A, MDE explains that it used the data files created and made available by EPA. MDE computed biogenic emissions with a modified version of EPA's Biogenic Emission Inventory System (BEIS) model that utilized county land use data from EPA's land use inventory and temperature and cloud cover data from the National Weather Service. This method is acceptable under EPA's emission inventory guidance.

7. Emissions Summary

The Cecil County base year inventory SIP contains a summary of 2017 ozone season day emissions by source category, which is presented in Table 1 in this document. MDE notes that the biogenic emissions are taken from EPA's NEI 2014 database. Total biogenic emissions for July 2014 were divided by 31 days to develop average ozone season day emissions for each jurisdiction in the region and then added together to develop the regional total.

Table 1. 2017 Cecil County BYE Summary (tons per ozone season day)

Source Category	VOC	NOx	CO
Point	0.415	1.604	0.472
Quasi-Point	0.000	0.000	0.000
Non-Point	2.729	0.333	1.272
Non-Road	2.315	1.019	15.546
MAR	0.063	1.463	0.259
On-Road Mobile	1.468	4.460	19.110
Anthropogenic Total	**6.990**	**8.879**	**36.660**
Biogenic	33.776	0.555	4.079

III. Proposed Action

EPA's review of this material indicates the Cecil County base year inventory SIP meets the base year inventory requirement for the 2015 ozone NAAQS for Maryland's portion of the Philadelphia Area, which consists solely of Cecil County, Maryland. Therefore. EPA is proposing to approve the Cecil County base year inventory SIP, which was submitted on July 30,

2020. EPA is soliciting public comments on the issues discussed in this document. These comments will be considered before taking final action.

IV. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this proposed rulemaking, proposing to approve Maryland's portion of the Philadelphia nonattainment area base year inventory for the 2015 ozone NAAQS, does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: January 3, 2022

Diana Esher,

Acting Regional Administrator,
Region III.

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